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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,004	05/26/2006	Erich Buhler	UP-350	7249
80494	7590	09/12/2008		
George Pappas 919 S. Harrison Street Suite 300 Fort Wayne, IN 46802			EXAMINER MUROMOTO JR, ROBERT H	
			ART UNIT	PAPER NUMBER
			3765	
			MAIL DATE	DELIVERY MODE
			09/12/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/581,004

**Applicant(s)**

BUHLER ET AL.

**Examiner**

BOBBY H. MUROMOTO JR

**Art Unit**

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

The abstract of the disclosure is objected to because the language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.; and the form and legal phraseology often used in patent claims, **such as "means"** and "said," should be avoided.

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 13-15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Speich US patent 6,328,076.

Speich discloses a thread control device for a shedding mechanism in a weaving loom. The actuator mechanism for the heddles (thread guiding members) is moved in one direction by a prestressed spring (positively designed) and in the opposite direction

by a pneumatic cylinder/piston assembly 178a as seen in figure 41, that is connected to a gas supply 190 to a valve 184.

Figure 41 clearly shows valve seats limiting the stroke of the valve as claimed. The position of the valve when the spring is fully extended inherently occurs simultaneously with the 'shutting off' of the compressed gas source as Speich discloses, " the control element moving to and fro in the longitudinal direction is pretensioned in one direction at the lower end by means of a return spring and is connected at the upper end with the actuator by means of a connecting element such as a cord.

In such a thread control device, **the actuator does not have to execute the entire stroke path, but only a part corresponding to the switching amplitude.** with the result that the device can be constructed in a substantially simpler and smaller way by contrast with the jacquard device, and that only a smaller amount of energy is required to surmount the switching path by comparison with the existing jacquard devices."

Figure 41 clearly shows a first valve seat at one end of a housing 186 and a second valve seat at a closing off portion of the housing 186 having a passage duct in the 'closed off portion' (slimmer upper portion of the housing); housing 186 is clearly cylindrical and sealed off.

The gap between the valve member and the housing wall inherently serves as a throttle point as the valve (piston) regulates the amount of pressure felt by the system.

The valve 184 is clearly shown as in the lower portion of the cylinder chamber.

The slimmed down portion of the upper portion of the housing 186 is considered a 'feed pressure chamber'.

The lower portion of the housing 186 clearly serves as a valve housing and has a gas feed source 190 that is on the lateral wall of the cylinder (pressure chamber).

Lower slimmed portion of the housing 186 serves as the first valve seat, while the upper slimmed portion serves as the second valve seat.

Claims 17-19 are functional in nature. Since all structure as claimed in these and intervening claims are disclosed, it follows that the functional limitations recited are inherently present since the claimed structure and the reference structure are shown as identical or nearly identical. Nothing precludes the reference structure from providing the functions recited in these claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speich in view of Hindle US patent 2,425,676.

Although Speich teaches essentially all of the limitations of the claimed invention, Speich does not specifically teach the use of an oil separator or oil separation outlet with the actuator cylinder/piston system.

However, the use of oil or other viscous fluids and lubricants in piston/cylinder devices is widely known and practiced in all types of mechanical arts to reduce friction and provide pressurized lubrication and dampening effects in moving mechanical parts. It would have been well within the skilled artisan's knowledge and experience to use oil as a pressurized lubrication fluid in a piston/cylinder arrangement (which would inherently include oil feed, outflow, and conduits) to provide lubrication and dampening effects to the moving parts of any machine much less a shedding device for a weaving loom.

Additionally, Hindle teaches a hydraulic shedding means that uses in combination with a cylinder/piston actuator oil and the required oil separation outlet/outflow device d2 to d4 located on the top and bottom of the pressure chamber or cylinder (depending on the stroke direction either of the conduits will serve as the feed or outflow tubes.

Therefore it would have been obvious to one of ordinary skill in the art to incorporate an oil circulation (feed, outflow, separation, storage) device into the cylinder/piston actuator of Speich to provide the actuator and interconnected mechanical parts of the loom with pressurized lubrication to reduce friction and noise between the moving parts of the shedding device.

### ***Response to Arguments***

Applicant's arguments filed 6/02/2008 have been fully considered but they are not persuasive.

Applicant's assertions and attachment of definitions with regard to "pistons" and "valves" prove the examiner's position. As a 'piston' is a type of 'valve'. Also the device in the prior art clearly "regulates the flow of fluids" as defined by applicant's attached definition of valves.

Applicant incorrectly argues a combination of piston and valve is required by the claim. However, the claim does not require such combination.

Applicant seems to argue 'first' versus 'second' valve seats but all claimed structures are clearly shown so the nomenclature of whether one or the other is the 'first or second' is irrelevant. As the prior art device clearly functions in the same manner as required by the current claim language.

Also discussion with regard to non-analogous functionality is irrelevant in 102 rejections as stated by the MPEP.

Applicant's assertion that the fluid in the valve/piston would be at ambient pressure is incorrect. The movement of the piston creates pressure against the fluid and depending on the viscosity of the fluid and the size of the opening (in the prior art relatively small) would create some amount of pressure well above 'ambient pressure'. Such an assertion by applicant's representative shows clear lack of understanding of fluid mechanics.

Further the addition of the oil separating device in the combined rejection above does provide a gas pressure chamber from the base reference and an oil separating device from Hindle. Arguments regarding separate elements are not only not required by the claims but are shown by the combined references above.

Since these are the arguments and no amendments of scope are offered the rejections remain.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **BOBBY H. MUROMOTO JR** whose telephone number is (571)272-4991. The examiner can normally be reached on 8-530, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on 571-272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert H Muromoto, Jr./  
Primary Examiner, Art Unit 3765  
February 22, 2008